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09/666,545	09/21/2000	Kenneth N. Myers JR.	FE-00461	7582

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WHITHAM, CURTIS & CHRISTOFFERSON, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

EXAMINER

STEVENS, THOMAS H

ART UNIT PAPER NUMBER

2123

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/666,545

Applicant(s)

MYERS ET AL.

Examiner

Thomas H. Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 is examined.

Inventive Entities and Priority

2. It is clear that Mimi Nguyen (provisional: 50/115,010) was missing from application (application: 09/666,545). Thus, priority based on these facts, is denied (See MPEP 201.11; Feb. 2003 version, pg. 200-73, Section IV: Same Inventors or Inventors).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The specification is vague in detailing what an intangible component is in relation to "abstract component type".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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6. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The following terms need redefining or rewording within the context of the claim:

Claims 3,4: "abstract component types" (pg. 44, lines 34 and 37, respectively)--vague.

Double Patenting

7. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 09/666,545.

For example, claim 1(09/631694) claims an inter-enterprise collaborative engineering environment linking multiple systems via a bi-directional link between data bases (pg.32 lines 1-5 and 13). However, claims of (09/666,545) claims a web-centric collaborative engineering environment linking multiple systems together (pg. 2, lines 1-6).

One of ordinary skill in the art at the time of invention would have known that a "web-centric" product has inherent features such as a data base network with vast data bases or a plurality of data bases (broadly speaking: multiple systems), which is bi-directional in nature; concluding that these applications are the same. This is a provisional obviousness-type double patenting.

Claim Rejections - 35 USC § 103

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara-H et al. ("Model-based Architecture" (1997)) in view of McQuary ("A Collaborative Engineering Environment for 21st Century Avionics" (1998)).

Hara et al. teaches a Cooperative Environment for Enterprise-Computing (CEE) which consist of an organization, business function/process with concurrent engineering by providing notification on the creation or modification of the output document of a process to the succeeding process (abstract); but doesn't teach an actual application.

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McQuay teaches the Collaborative Engineering Environment (CEE) for advanced distributed modeling and simulation and engineering tools in an integrated environment to support technology development (abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use Hara et al. to modify McQuay since it would have been advantageous to implement and use such an abstract network.

Claim 1. A computer implemented product catalog for use in a web-centric collaborative engineering environment (CEE) (Hara: abstract) for providing an inter-enterprise collaborative mechanism for organizations developing and maintaining complex system products, the CEE providing a federated architecture linking multiple systems and applications together to enable collaboration among enterprise members, comprising (Hara: pg. 182, left column, Introduction, paragraphs 1 and 2): an object oriented database management system (ODBMS) managing an associative object model (product model) for providing a persistent understanding of product and program information (McQuay: pg. 256, right column, bullets 1-3) assets and tools available in the enterprise (McQuay: figure 4 and pg. 261, Data Interfaces Management section); a plurality of part objects forming a product catalog, the part objects being defined by the product model (McQuay: pg. 256, right column, lines 2-6) and stored in the ODBMS, wherein each part object has intrinsic characteristics corresponding to a plurality of default values, the product catalog providing an application independent control, security (McQuay: pg. 260, right

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column, Application Interfaces) search mechanisms, concurrency control, versioning, information structuring, information mapping and exchange, wherein the information available to each member is information necessary for the member to complete role and team based tasks ((McQuay: pg. 257, right column, 3rd paragraph; and 258, left column, 1st paragraph) and wherein the linking means comprises a plurality of tools, each tool communicating information with the ODBMS.

Claim 2. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein a part object is a collection of one or more other part objects ((McQuay: pg. 257, right column, 3rd paragraph; and 258, left column, 1st paragraph).

Claim 3. A system as recited in claim 1, (Hara: abstract and McQuay: abstract), wherein a part objects represent commercial-off-the-shelf (COTS) hardware, electrical, software, or abstract component types (McQuay: pg. 260, left column, Applications).

Claim 4. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein the product catalog supports part objects representing commercial-off-the-shelf (COTS) hardware, electrical, software, and abstract component types (McQuay: pg. 260, left column, Applications).

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Claim 5. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein the product catalog provides a single point of information management with unlimited application by reference (Hara: pg. 183, left column, 2nd paragraph; McQuay: pg. 259, figure 3).

Claim 6. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein the CEE enables members of the enterprise to capture technology and model information and associate the captured information with a system component for entry into the product catalog (Hara: pg. 184, right column, 2nd paragraph; and McQuay: pg. 257, left column, 1st paragraph).

Claim 7. A system as recited in claim 6 (Hara: pg. 184, right column, 2nd paragraph; and McQuay: pg. 257, left column, 1st paragraph), wherein the parts and components in the product catalog are extensible to an existing user community in an enterprise, the user community requiring customization of parts for use in projects associated with the enterprise (Hara: pg. 182, Architecture of CEE, 2nd paragraph, lines 1-4; and McQuay; figure 3 and pg. 259, left column, 3rd paragraph).

Claim 8. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein the product catalog provides a single extensible interface for peer enterprise member information management systems (Hara: pg. 182, Architecture of CEE, 2nd paragraph, lines 1-4; and McQuay; figure 3 and pg. 259, left column, 3rd paragraph).

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Claim 9. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein the product catalog supports part objects representing projected or hypothetical components (McQuay: pg. 259, left column 3rd paragraph, and right column, 1st paragraph).

Claim 10. A system as recited in claim 1 (Hara: abstract and McQuay: abstract), wherein intrinsic information of a component, the component being represented by one or more parts in the product catalog, is augmented with implementation specific information (McQuay: pg. 259, left column 3rd paragraph, and right column, 1st paragraph).

Claim 11. A method for customizing a product catalog for use by a project in a collaborative engineering environment (CEE) (Hara: abstract and McQuay: abstract) which provides an inter-enterprise collaborative mechanism for organizations developing and maintaining complex system products (McQuay: pg. 259, right column, 3rd paragraph) and provides a federated architecture linking multiple systems and applications together to enable collaboration among enterprise members (Hara: pg 183 figures 1 and 2; and section 3 Enterprise Model in CEE), comprising: generating a product model for the project, wherein the product model defines project related informational elements (Hara: pg. 182, left column, Introduction, 1st paragraph; and McQuay: pg. 258, section 4 "Defining a Collaborative Environment for Virtual Prototyping", 1st paragraph) and their corresponding characteristics, and wherein the project

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related informational elements may differ based on domain area; identifying elements (parts) existing in a enterprise-wide product catalog.

Claim 12. A method as recited in claim 11(Hara: abstract and McQuay: abstract), wherein the product catalog utilized for identifying parts in the identifying step and providing new parts in the providing steps comprises: an object oriented database management system (ODBMS) managing an associative object model (product model) for providing a persistent understanding of product and program information (McQuay: pg 256, right column, bullets 1-3; pg. 259, left column, 3rd paragraph, right column 1st paragraph) assets and tools available in the enterprise; a plurality of part objects forming a product catalog, the part objects being defined by the product model and stored in the ODBMS, wherein each part object has default characteristics corresponding to a default environment; means for generating part references, where a part reference refers to a corresponding part object in the product catalog, and wherein the part reference has characteristics customized for a project that override the default characteristics of its corresponding part object; and means for linking members of the enterprise with part objects and customized part references via a collaborative engineering environment (CEE), the CEE having a framework for collaboration which provides access control, security (McQuay: pg. 260, right column, Application Interfaces) search mechanisms, concurrency control, versioning, information structuring, information mapping and exchange(McQuay: pg. 260, right column,

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Middleware), wherein the information available to each member is information necessary for the member to complete role and team based tasks, and wherein the linking means comprises a plurality of tools, each tool communicating information with the ODBMS (Hara: pg. 186, section 6.1, 2nd paragraph.

McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management).

Claim 13. A method as recited in claim 11 (Hara: pg. 186, section 6.1, 2nd paragraph. McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management), wherein the step of providing new parts, further comprises: capturing technology and model information by members of the enterprise; and associating the captured information with a system component for entry into the product catalog.

Claim 14. A method as recited in claim 13 (Hara: pg. 182, left column, Introduction, 1st paragraph; and McQuay: pg. 258, section 4 "Defining a Collaborative Environment for Virtual Prototyping", 1st paragraph), further comprising: entering new part objects into the product catalog, wherein the new part objects correspond to system components associated with the captured information in the associating step.

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Claim 15. A method as recited in claim 13, (Hara: pg. 186, section 6.1, 2nd paragraph. McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management) further comprising: entering updated part object information into the product catalog when captured information results in necessary modification to an existing part and not identification of a new part, wherein the updated part objects correspond (Hara: pg.184, section 4.2 Concurrent Engineering by Document Sharing and Notification).

Claim 16. A method as recited in claim 13(Hara: pg. 186, section 6.1, 2nd paragraph. McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management), wherein the new or updated part objects are reviewed by at least one member of the enterprise having authority to accept or reject the part objects, and wherein if a new or updated part object is rejected it is not entered into the product catalog, but if a new or updated part object is accepted (Hara: pg.184, section 4.2 Concurrent Engineering by Document Sharing and Notification section 4.3, 2nd paragraph).

Claim 17. A method as recited in claim 16(Hara: pg. 186, section 6.1, 2nd paragraph. McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management), further comprising notifying members of the enterprise

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that new parts or part information are available (Hara: pg.184, section 4.2 Concurrent Engineering by Document Sharing and Notification section 4.3, 2nd paragraph).

Claim 18. A method as recited in claim 17(Hara: pg. 186, section 6.1, 2nd paragraph. McQuay: pg. 259, left column, 3rd paragraph and all of right column; and pg. 260 and 261, sections Communications Infrastructure and Data Interfaces Management), wherein the step of notifying further comprises automatically updating project specific parts and components with modified part information for updated parts (Hara: pg.184, section 4.2 Concurrent Engineering by Document Sharing and Notification; and section 4.3, 2nd paragraph).

Claim 19. A method as recited in claim 11(Hara: abstract and McQuay: abstract), further comprising: retrieving part information from the part catalog by members of a project within the enterprise; and customizing retrieved part information for use in a project (McQuay: pg. 258, right column, 1st paragraph).

Claim 20. A method as recited in claim 19(Hara: abstract and McQuay: abstract), wherein the step of customizing further comprises: maintaining desired default characteristics for retrieved part information; overriding default characteristics for retrieved part information, as necessary to represent system components of the project; and extending part information with additional part characteristics, as necessary to represent system components of the project, the

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additional part characteristics being omitted from part information retrieved in the product catalog (McQuay: pg.258, left column, 1st paragraph. Note: most if not all engineering-based formulas would naturally contain default values (i.e., Boltzmann Constant) or a list of constants (i.e., permeability, path loss, conductivity of materials, etc.), thus concluding these values of this nature are inherent).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. Reference to Thackston, U.S. Patent 6,259,513 (2001) is cited which teaches a comprehensive, integrated computer-based system and method for undertaking an engineering design and development effort in a virtual collaborative environment, identifying qualified fabricators for manufacturing a part design base on fabricator capability information stored in a global registry database substantially maintained by the fabricators themselves and conducting a virtual bidding process whereby electronic representations of three dimensional model and specification data provided by a central server.

Reference to Standridge et al, "Progress in Modular Simulation Environments", Proceedings of the 1996 Winter Simulation Conference (1996), is cited as teaching and implementing software tailored for each particular simulation project by modular simulation environments.

Reference to Salomons et al., "Conceptual Graphs in Constraint-based Re-Design", (1995) is cited for the use conceptual graphs for the representation of different types of objects and constraints in re-design support system.

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Correspondence Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is (571) 271-0365, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Kevin Teska at (571) 272-3716. The fax number for the group is 703-308-1396.

Any inquires of general nature or relating to the status of this application should be directed to the Group receptionist whose phone number is (571) 272-1400

November 19, 2004

THS



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER